

## Safe Childbirth

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Recall that Dr. Price mentioned that primitive peoples with good dental arches usually had short, easy labor and childbirth experiences. This was brand new information to me. My mom had told me how her labor with me was, and every woman we knew had had difficult labors. It didn't sound like anything I wanted to experience! Their deliveries were certainly very different accounts than the Eskimo woman who had her children during the night and hadn't bothered to wake her husband for them. I knew the diet I had grown up on; I knew the health problems I had throughout the years, so if it was possible to have an easy labor and delivery, I wanted to find out how so that I could be better prepared if I should have children someday. So when Dr. Price mentioned the work of Kathleen Olga Vaughan, an obstetric doctor during the 1920's and 1930's, I was curious to know what she had observed and tried. I have been interested to know more about this topic since I first read about it many years ago, but I only got a copy of Vaughan's work last year. So we will discuss her work and things that can be done even if health is not optimal for an easier childbirth.

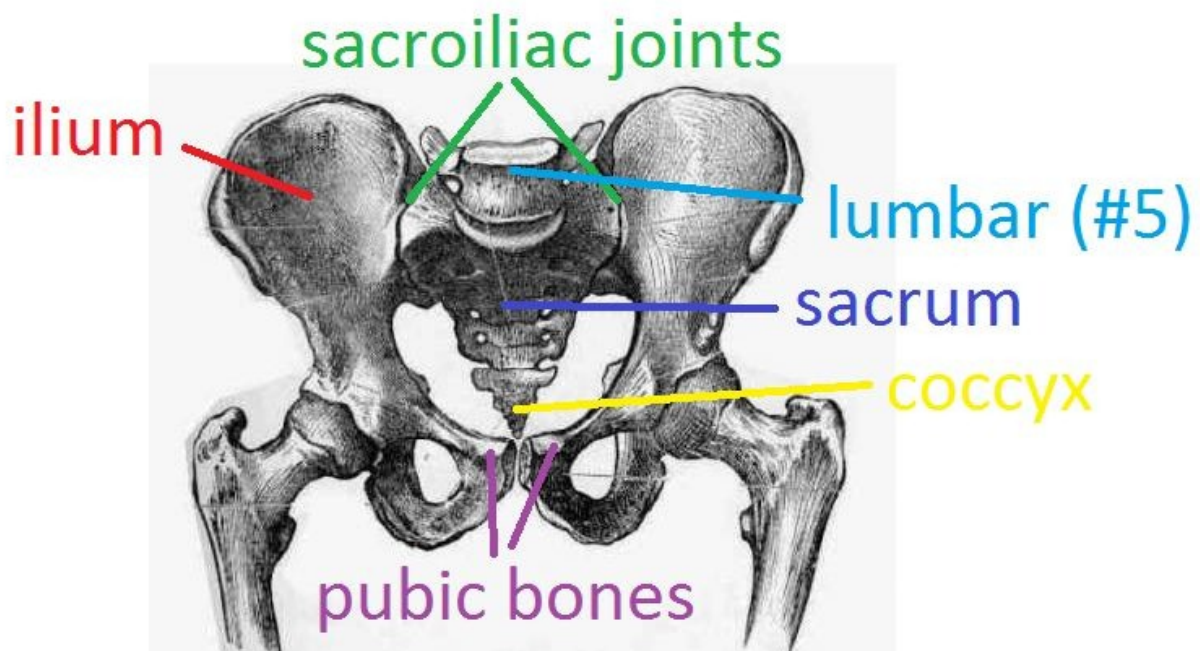
Before we begin, let's define a few anatomy terms.

*perineum*: the skin and structures in the region between the anus and genitals.

*lumbar*: the part of the back between the ribs and pelvis.

*sacrum*: the large, triangular, wedge-like bone that forms the center of the back of the pelvis and the lower part of the spine. The sacrum consists of five fused, broad vertebrae and terminates in the tail-like coccyx.

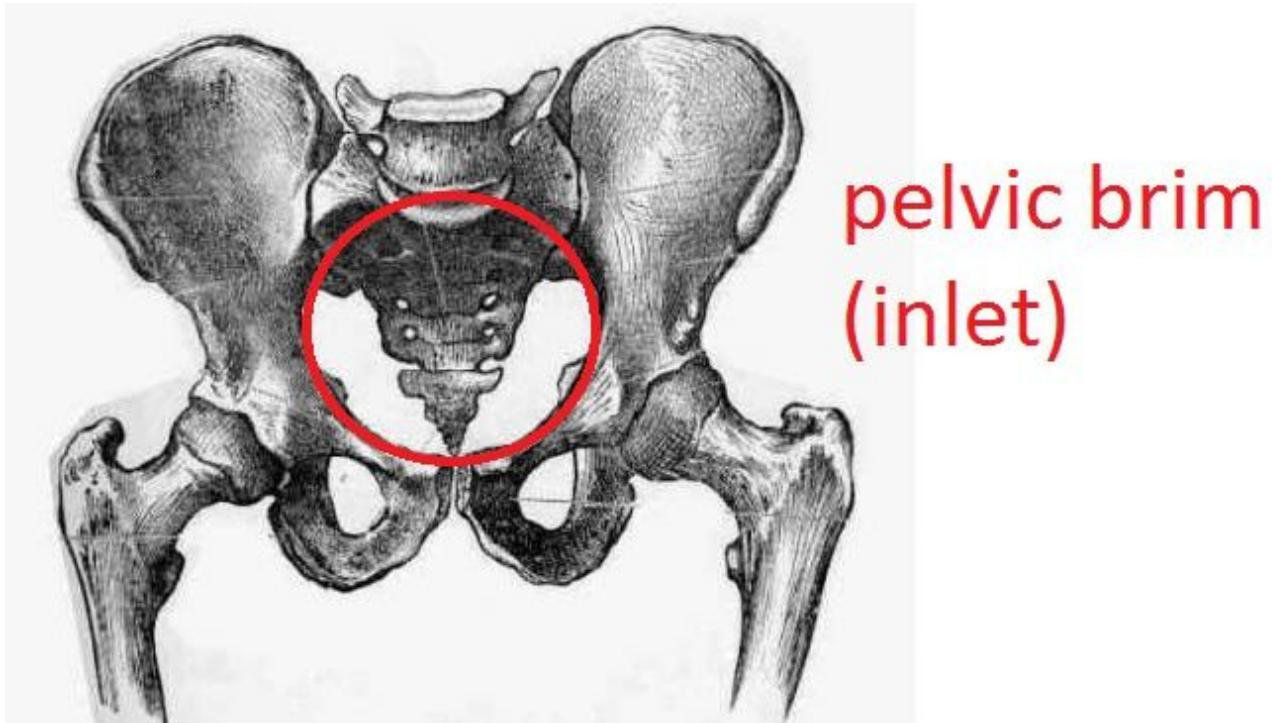
*ilium*: the broad, flaring portion of the hip bone.



*sacro-iliac joint*: the joint formed by the sacrum and ilium where they meet on either side of the lower back. The tight joint allows little motion and is subject to great stress, as the body's weight pushes downward and the legs and pelvis push upward against the joint. The sacroiliac joint must also bear the leverage demands made by the trunk of the body as it turns, twists, pulls, and pushes.

*pubis*: the bone forming the front part of the pelvis.

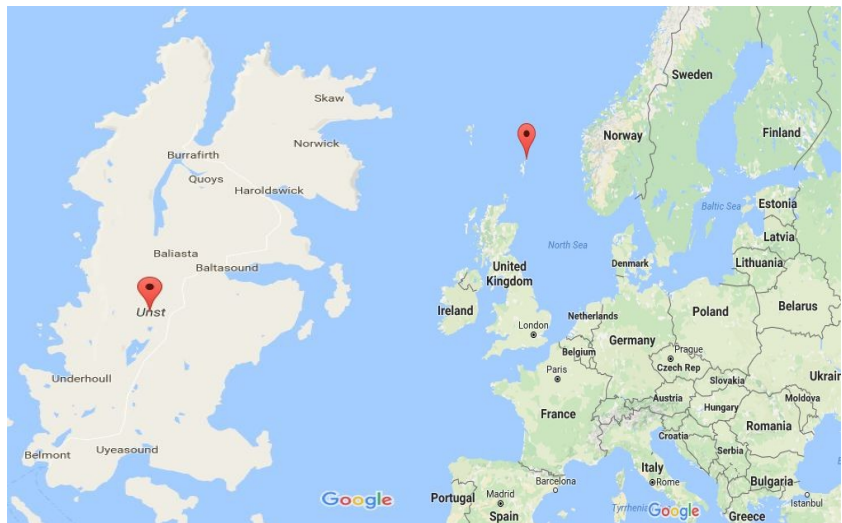
*pelvic brim*: the upper opening of the true pelvis, bounded by the pubic bones, ilium, and the sacrum.



Like many doctors, Vaughan began to notice problems in her society and set out to find out why they were occurring. What was the problem? In 1932 it was published that over 50 women died in childbirth every week in England and Wales alone, and of those no less than 20 a week die from septic infection. There was also an increased infant mortality rate, which tended to fall more heavily against the males so that there was an outnumbering of men by women. Difficult childbirth is also responsible for the production of mental defectives. Vaughan noted that even though more care was given to the expectant mothers over a 25-year period the death rate was basically unchanged. So she set out to discover why.

Even though many women had difficult labor in England, there were still districts in the British Isles where “whole communities still bear fine children with little trouble and with safety to both mother and child, *and where death in childbirth is practically unknown.*”

One such district is in Shetland, on the Island of Unst. On the entire island, except in one district, the



people live and work on farms. They have easy labor and delivery, assisted by midwives, and the doctor is only called if the labor seems prolonged, more than 8 or 10 hours. In the one district, most women work indoors doing things such as knitting and other sedentary occupations. In these cases, some skilled assistance is nearly always required because the usual difficulty seems to be an inertia of the uterus. “This would seem to indicate that outdoor work on a farm is directly conducive to quick, easy labor; while indoor life, and trying to dress up to fashion plate standard, has the directly opposite effect.”

An Australian doctor shared 14 cases of painless labor with Vaughan in 1928. Here are just two. Case 11. “The patient awoke in the night to find the birth occurring. While her husband was telephoning for the doctor the child was born in the bed.” Case 7. “Aged 27, was living in a tent. The womb was seen to be contracting well, though there was no sign of pain, and the fetal head appeared painlessly. The placenta followed in 10 minutes without pain, and the womb became well contracted. She got up the next day and did her work as usual.”

Vaughan worked at the Kashmir Zenana Hospital, and usually saw only the worst cases, because the people would try everything they knew to help with delivery before seeking a doctor. Yet she knew that there were also women in Kashmir who didn’t have trouble in childbirth. Who were they? “They were the outdoor women such as the field workers, doing most laborious work, and the boat-women of the Mangi class, of whom the Mission Doctor, after 30 years’ experience in Kashmir, says he never remembers one coming to hospital for her [delivery].”



www.alamy.com - ERYGJD

The country women who visited the out-patient department for things like indigestion or bringing children with minor ailments were asked about their labor. They all had had several children without any trouble at all, “and the last idea that would occur to any of them would be to go to a hospital for such a natural and ordinary event as having a baby, an event common to every woman of their acquaintance.”



Vaughan noticed the pattern: “In the villages the pelvises are well developed. In towns, difficult labor, deformed pelvises, and osteomalacia are more common.... Full-term pregnant women of the working classes often go for outdoor work and come back with babies after easy labor.”

“A woman went into the bush one day to procure firewood and returned with a large bundle of the same slung on her back. She walked into camp and squatted down that she might slip her arms from the straps and so get rid of her burden. As she did so her child was born. But she never turned a hair.



Quickly undoing some hidden tie or button, she allowed one of her garments to slip down and cover the child, thus saving the situation beautifully.”

So it would seem that for primitive women, living an active life outdoors on a farm, childbirth would be an easy task. Labor would last between 2 and 10 hours, the births of males and females would be approximately equal, the uterus would contract well after the delivery, and the mother would be able to go about her work within hours or the next day.

Vaughan noted that “A native woman never lies down when in labor and cannot understand why a white woman would do so; she says that it is a most inconvenient and unnatural attitude to assume at such a time.”

So if they thought that lying down during delivery was unnatural, what position(s) did the primitive women use? Here we see Peruvian pottery showing the method of childbirth on the left. On the right we see a hieroglyph expressing the idea of childbirth and a drawing depicting the labor and delivery of Cleopatra.



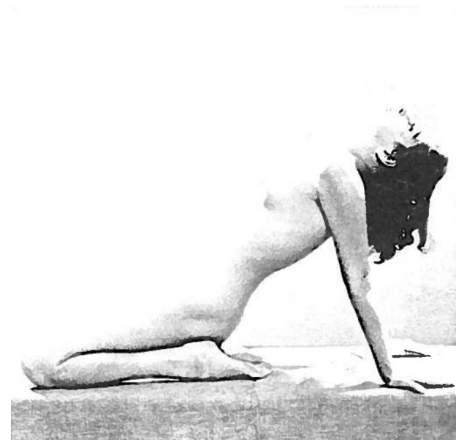
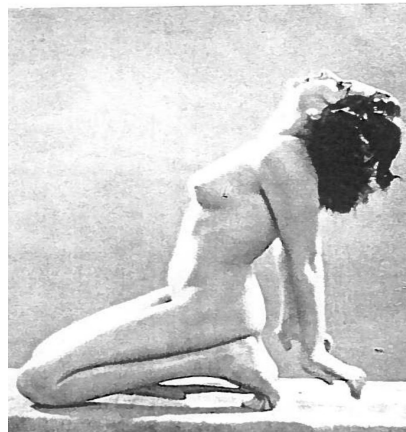
From the earliest times, the natural position of childbirth was crouching or squatting. To ease the burden of being in this position for long periods, a special chair or stool can be used.

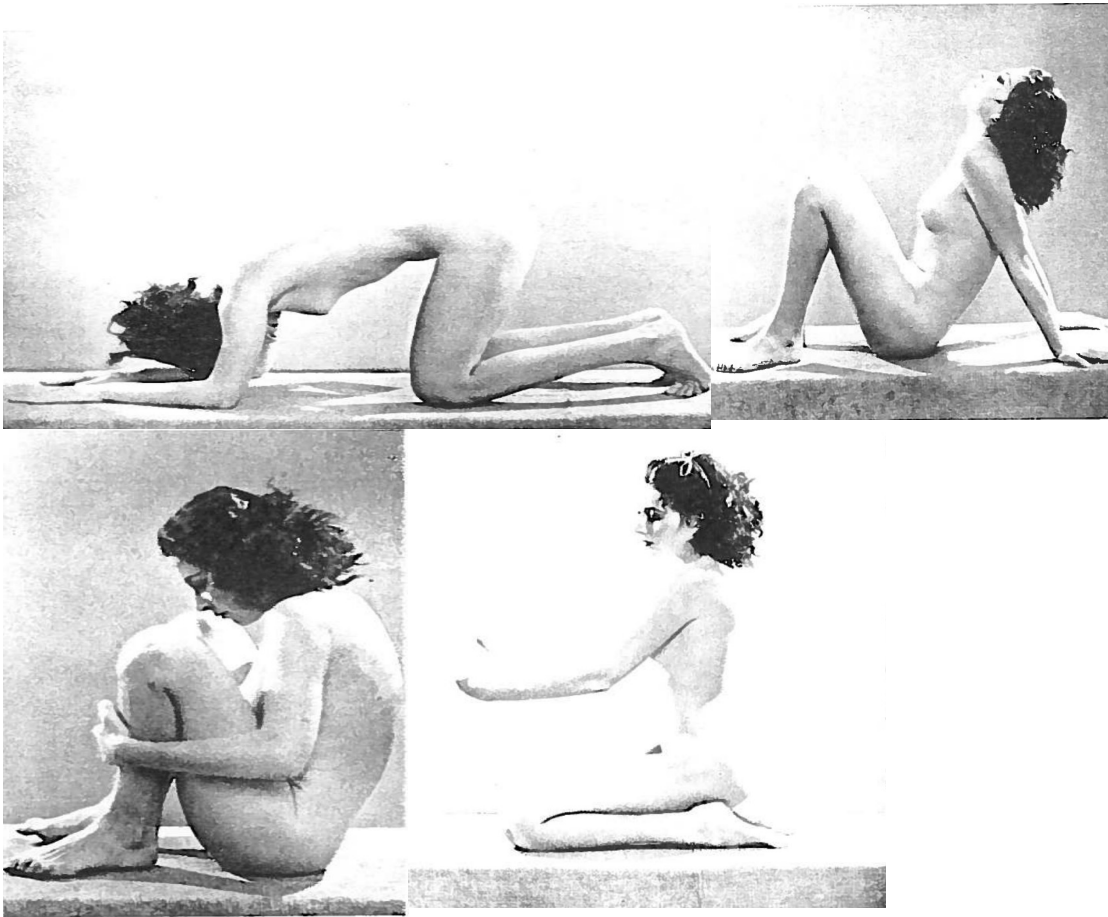
The Aborigines of Australia, when they give birth, “kneel down with knees wide apart, buttocks resting on their feet, and the baby is born in a moment without pain.”

At a delivery attended by Vaughan, she notes: “A woman, possibly her mother, knelt behind her and supported her under the armpits, while she knelt on the floor with knees apart, and the child was easily born into my hands as I knelt in front of her. In a few more minutes she pressed her abdomen and the afterbirth came away.... Is not this the natural posture we read of in Genesis 30:3 when Bilhah’s child was delivered on Rachel’s knees?” There it says that Bilhah “*shall bear upon [Rachel’s] knees*”.



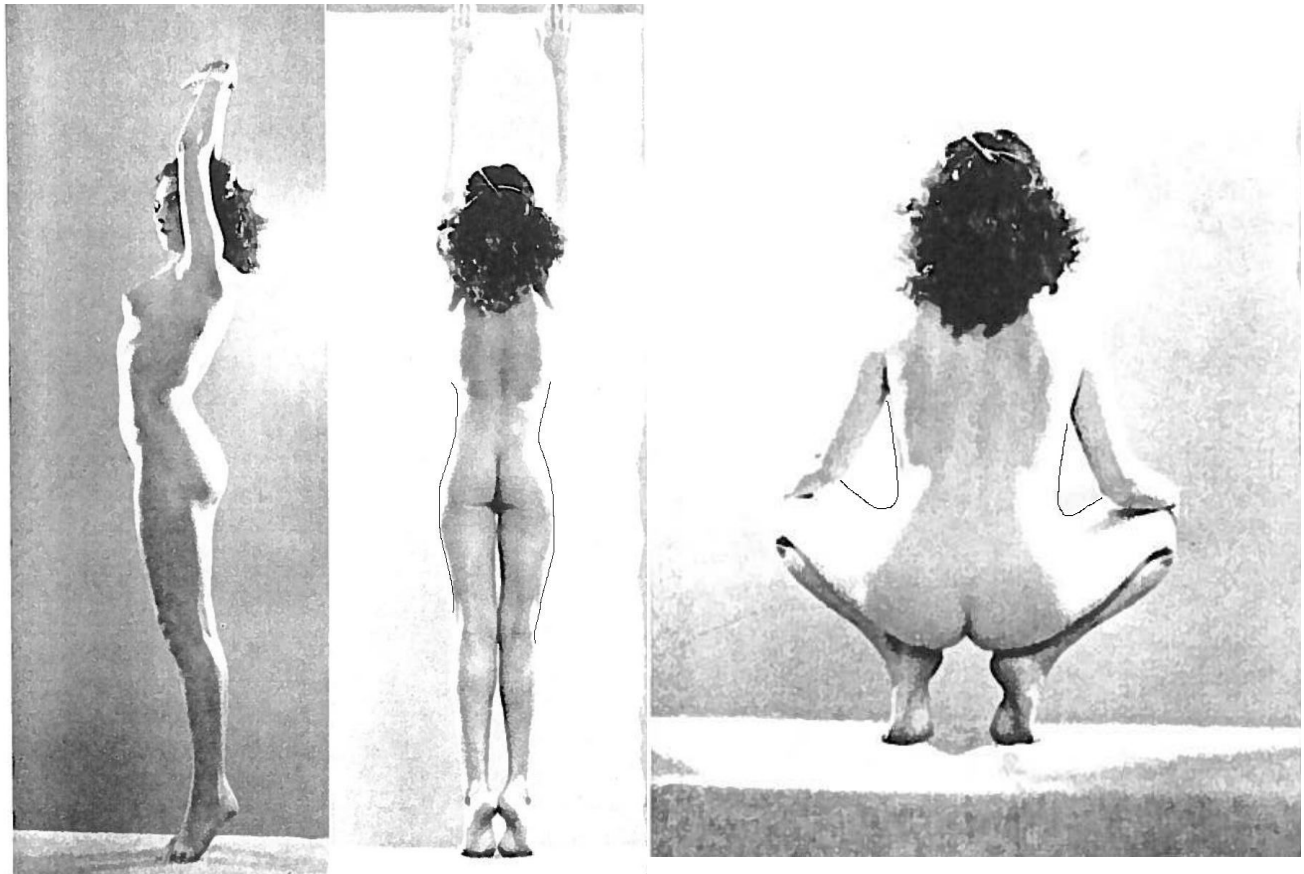
Squatting, bearing down, resting with the weight on all fours, delivery. Vaughan recommends “Squatting: suitable to the first stage of labor as an assistance in dilation. Kneeling: suitable as giving fullest liberty to the sacrum. All fours: best adapted to slow down the birth, and for the passage of the head as it takes pressure off the perineum, [which often tears in those who lie down for birth]. In practice the employment of a low rocking chair facilitates these changes in posture.”



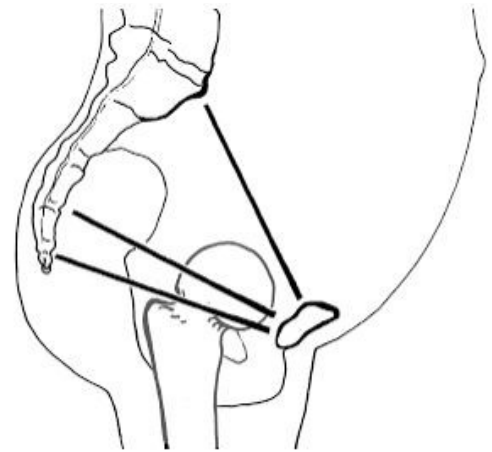


Primitive women considered lying down during delivery to be a reflection of an unnatural attitude toward this important event. But were there other reasons that a woman should not give birth lying down? As it turns out, there are good physical reasons against it. Vaughan tells us, “All women left to themselves have their children kneeling, crouching or squatting, because in this position the pelvis is in fullest expansion, and so gives more room for the passage of the child.”

She studied two women at the end of their pregnancies, taking external measurements from the last lumbar vertebra to the pubic bones and observed that it was 4cm greater in the squatting position compared to the standing position. Wikipedia references an article stating that the birth canal will open 20-30% more in a squat than in any other position.



“Alone with nature, the [pregnant] woman makes slight changes of position as the head descends, a swaying movement backwards and forwards, and this change of position causes a delicate adjustment of the pelvic bones as the head passes.... It seems that the final result of the changes produced when the crouching position is assumed is to turn the pelvis from a passage of varying caliber... *into a tube or canal of uniform measurements*. In a woman about to give birth in this position, the lumbar curve in the spine is obliterated, and the whole passage is converted into a cylindrical tube. This agrees with what we see in animals.”



To get a better idea of the movements of the pelvis, we have a short video. Now check out the video: “Anthrology of the Pelvis: Nutation and Counternutation” at <https://www.youtube.com/watch?v=-ZKgzMvWXVM>

“When women took to their beds and lay down to bear children, even normal childbirth became delayed and difficult. It was quite forgotten that the pelvis is not a cavity with rigid walls, but an expanding cage which in full expansion makes a cylindrical passage for the child. *Childbirth can be made difficult simply by adopting an unsuitable posture* in which the pelvis cannot stretch, and the infant now has to be expelled by main force and straining.”

Contrast the normal of the primitive woman to today's normal. With the first baby the woman is expected to be in labor for 12-14 hours; subsequent children usually go more quickly. The standard position is lying on her back, sometimes with straps holding her feet in stirrups. Even though home births have been increasing in popularity in the past decade, still most women birth their children in hospitals. In 2006, approximately 1 woman out of 200 had a home birth. Some estimates for more recent years indicate that about 3 women out of 200 are now birthing at home. This applies only to the US. For example, in the Netherlands home births account for about 20% of all births. About 60% of US women take anesthesia during labor. C-section is *the most performed operation* in US hospitals today and accounts for about 1/3 of all births. Besides doctors being a bit surgery-happy, the reason for having a C-section is because the baby will not fit through the birth canal without considerable, possibly life-threatening, damage! What would cause this?

In a word, our habits.

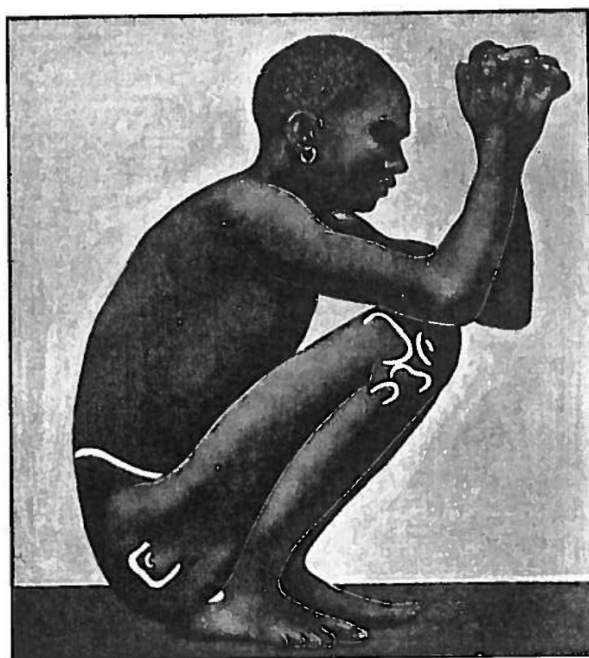
Your lumbar curve develops only as you assume an erect posture when you learn to walk. This curve becomes more pronounced as you live an indoor life. The lumbar curve and sacrum tilt forward when you stand upright or sit with the back hollowed.

Young children who do a lot of horseback riding show an outward curve in the bones of the lower legs, simply from the position assumed while on horseback. "It is obvious then that in all growing children, especially before and at puberty, there is enough pliability in the bones to make long continuance in one position (such as sitting long hours at school) the cause of a permanent change of shape in them, especially long sitting on a still soft and growing pelvis."

Posture, and posture alone, may deform the pelvis. Another researcher told about how Zulu girls at puberty were obliged by tribal custom to sit in a certain way, resting on the ground with all the weight on one thigh only, while the other leg is drawn up. He found skeletal evidence of pelvic deformation due to this practice. Pelvic deformities can also be created by performing activities, such as riding a scooter or spending long hours writing at a desk, where all the weight is on one leg or side.

Another researcher described how the Punjabi custom of sitting on the ground abolished the lumbar curve, which is totally opposite the skeletal effects seen as a result of the Western custom of sitting in chairs.

Vaughan also explains how wearing high heels injures the pelvis and body in general: "[High heels] throw the body weight forward on to the arch (which should bear no permanent weight) and on to the ball and toes of the foot. The body has its natural poise upset, for the lumbar curve is accentuated and the sacrum is [extremely tilted forward], so that to keep the balance at all *the toes must be turned out* and the basis of support increased. Nothing could be worse from an obstetric point of view; the flexors of both leg and thigh are weakened and lose tone, the back broadens in the gluteal region and the knees can only be fully extended with difficulty."

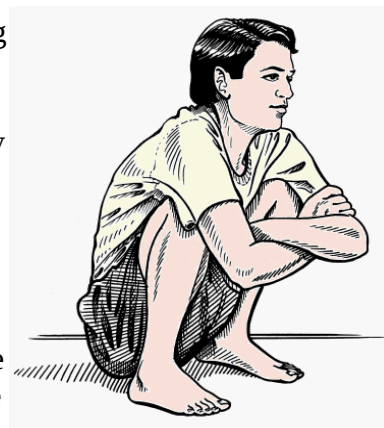




“It is impossible to move and exercise the sacro-iliac joints in the upright position, for in that position they are held and must be held firm and immovable to support the weight of the trunk and upper limbs.” Long sitting at school, the wearing of heels, the avoidance of all exercise involving crouching or stooping, all weaken the sacro-iliac joints and exaggerate the sacrum’s forward tilt so that it sticks out into the pelvic cavity, restricting the amount of space available for the baby during birth. Yet man’s natural state is to have the free use of these joints, which is accomplished by activities such as crouching, digging, climbing, rowing, and swimming. The sacrum is allowed free movement forwards and backwards, but the inactivity and more or less fixed posture of those with a sedentary life does not allow the free movement of the sacrum.

When you breathe, your ribs lift and expand to increase the capacity of the lungs. Similarly, when you squat, the joints of the pelvis also lift and expand to increase the capacity of the pelvis. This change in pressure in your chest during breathing stimulates circulation. Similarly, changes in pressure are accompanied by circulatory changes in the pelvis when you squat. The organs situated in the pelvis – rectum, bladder, uterus or prostate – are thus “pumped” with fresh blood and oxygen. Vaughan argues that “absence of pelvic movement causes both pelvic and abdominal stagnation, and is probably the starting-point of the commoner diseases of the civilized, who cultivate the rigid pelvis. Nearly all civilized people live with the main drain blocked up. Their bowels are full of germs and the products of decomposition *because it is impossible to fully empty the bowel without squatting.*”

“All over the world, where there are no [Western toilets], so that squatting is an ordinary daily practice, there the women have little trouble in childbirth: the male and female births are approximately equal, cases of congenital defects are rare, and the general population are free from many of the diseases common to civilization.”



“For a pelvis to be in a healthy condition, either in man or woman, the joints *must* be exercised daily from birth, and nothing can replace the system of gymnastic exercises designed by nature. These are comprised in the squatting attitude, the natural position for defecation.... It keeps the pelvis mobile, and improves the circulation with it, while the musculature attached to it is kept in condition by constant exercise.” Where this practice is continued, appendicitis is not known, fibroids in women and prostatic enlargement in men are few, and cancer is almost unknown. “This position provides massage for all the pelvic organs and renders defecation easy. The higher the closet seats in a community the more constipation. With this goes difficult childbirth, because the pelvis is rigid, lacks exercise and *cannot expand.*”

“Stiffness or disuse of the pelvic joints can change the pelvic shape. If one sacro-iliac joint only is affected it is *that side* which remains undeveloped. Thus, mobile pelvic joints are essential factors in the development of normal pelvic shape.”

Vaughan measured many pelvises from skeletons and noticed that the same length of string arranged as a circle enclosed a larger area than the same string arranged in any other form; “circumference being equal, *the shape of the brim determines the capacity of the pelvis.*” Imagine a rubber ring from a jar lid. Is it obvious that if you squash it, even a little, that the total area is reduced? “The *shape* of the pelvic brim is more important than its circumference, as regards its capacity for the birth of the young.”

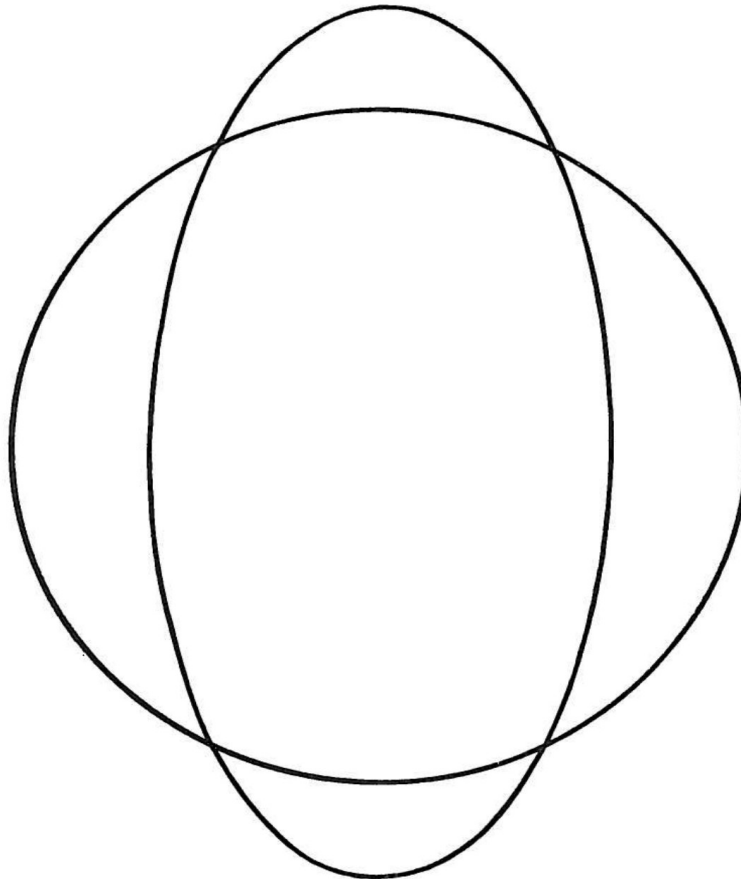
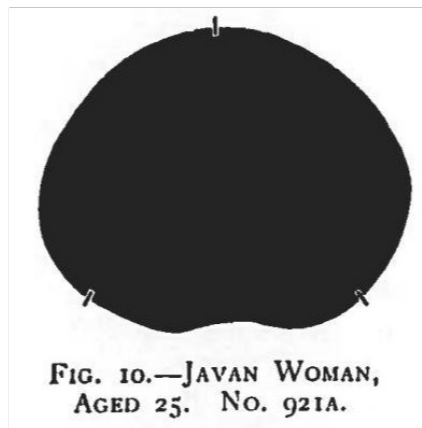
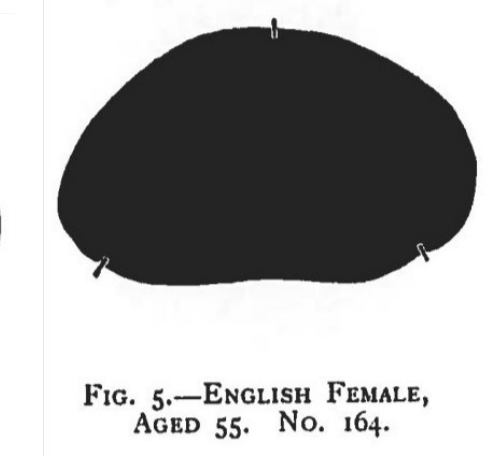
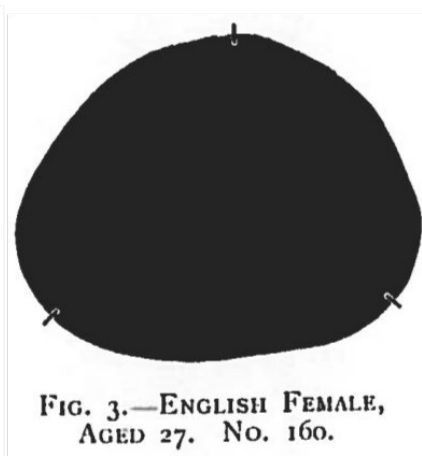
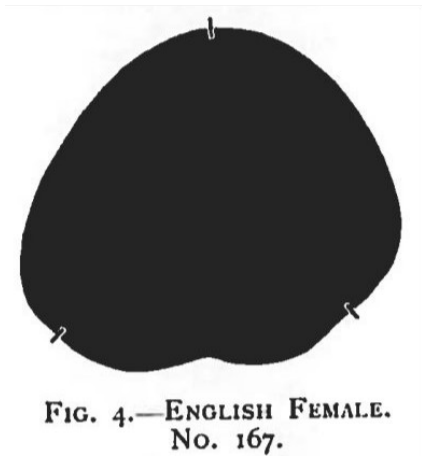
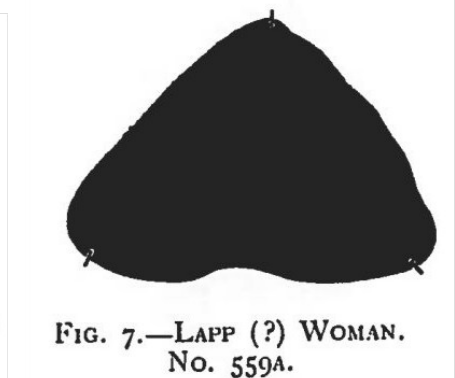
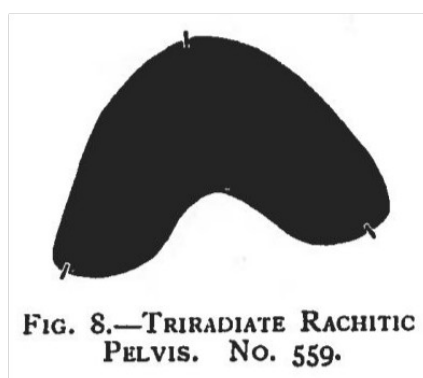
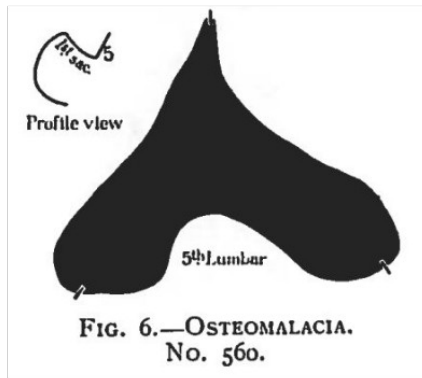


FIG 22.

The circle is the size of the normal round pelvic brim—i.e., 12 cm. diameter.  
 The circle and the oval have each the same circumference—i.e., 37.7 cm.  
 Note the difference in area enclosed. The oval with a conjugate of 7.7 cm.  
 has lost 16 per cent. of the area.

Here are some other pelvic brims for comparison. The first row shows severe deformities of the pelvic bones with very difficult labors, usually ending with C-sections; the second row shows milder deformities with somewhat difficult labors; the last row shows the best specimens of pelvic brims with easy labors.



“The more untouched by civilization and modern habits of life the more nearly circular the pelvis. All these people bore their children safely in primitive conditions with neither doctor nor skilled midwife.”

“The fetal head is made to mold into a perfect circle and a *larger fetal head can be born through a pelvis with a circular brim than through any other shape of inlet with the same boundary measure*. Now if there is the slightest departure from the circular brim, trouble follows with the fetal head because the area available for its accommodation is lessened, even if only by a fraction of an inch.” If you imagine a cup and a ball, you can see that if the cup is slightly dented, or even justly slightly out of shape, the ball is prevented from entering it.

“We cannot squeeze a round head through an oval pelvis without damage. All talk of race improvement is vain when our finest children are squeezed to death in the birth process.... A small round pelvis (especially if the joints are flexible) will often prove adequate where a large flat pelvis is useless. We shall later realize another advantage afforded by a pelvis with circular brim.... during birth the joints of the maternal pelvis are forced apart at the same time that the fetal head is squeezed together at the sutures.”

“We have to realize that the act of defecation and the act of giving birth are the same action. The same muscles of the abdomen and pelvis are used, the same movements of the joints take place, therefore the daily practice of the natural posture needed for one will keep the pelvis supple and prepared for the other.”

Besides squatting daily during defecation, there are other things you can do to stretch the pelvic joints. Vaughan created an exercise program that was “designed to loosen the pelvic joints, to stretch the sacro-sciatic ligaments and the muscles of the pelvic floor, to give tone to the abdominal muscles, and to encourage the fetal head to descend into the pelvis.” She used this exercise program with many pregnant women.

Now check out the video “Childbirth As An Athletic Feat (1939)” at <https://www.youtube.com/watch?v=g9wRBWDxReY>. The exercises were:

1. Deep breathing with open windows.
2. Leg swinging, holding on to the bed, and kicking up forward and back. (One young woman kicked her hand easily a few days before delivery.)
3. Leg swinging in circles.
4. Standing before a chair, each leg raised in turn and the foot placed on the seat.
5. Bending forward, holding low foot-rail of bed, feet together.
6. Squatting, holding on to rail of bed, knees well apart.
7. Squatting, knees together.
8. Ascent of 80 stone stairs 2 steps at a time (not holding the banisters) and descending the same way.

You may see websites these days with other exercises, particularly “Kegels or pelvic floor exercises”. Vaughan argues that any exercises “which contract the muscles of the pelvic floor are to be [done away with]. The civilized [pelvic floor] needs *stretching*, which can only be done by practice of the squatting position with thighs apart. This widens the pubic arch at the same time.”

Vaughan concludes by saying, “The saint and the criminal, the family, the race, the nation, all mankind pass through the pelvis of woman and are what she makes of them. A faulty mold does not produce good bricks however fine the clay.”

Even if a woman's health isn't perfect, she can help herself have an easier childbirth if she exercises as Vaughan recommends and uses the proper birth positions. The posture during birth can make a huge difference in whether the delivery is easier or potentially life-threatening.

Today, it is expected that childbirth will be agonizingly painful and difficult, and that the woman will need a period of recovery before going back to her usual activities. But God did not intend for childbirth to be this way. This is the result of sin – more specifically, living indoors without getting proper exercise and eating deficient foods which cause deformities of all kinds. Multiplied pain in childbirth is the punishment for following Satan:

**Genesis 3:16** *Unto the woman he said, I will greatly multiply thy sorrow and thy conception; in sorrow thou shalt bring forth children; and thy desire shall be to thy husband, and he shall rule over thee.*

Eve received this curse by quite literally eating the wrong foods. Every woman who hasn't repented of that will bear the same curse as Eve. But the woman who repents from the sins against her body and keeps the laws of health – of eating the right kinds of foods and living the right kind of life – will deliver her soul by her righteousness (**Ezekiel 14:14**). So whether we follow the spiritual laws or the physical laws God has established, the law is one, and the words of Solomon are true:

**Proverbs 11:6** *The righteousness of the upright shall deliver them: but transgressors shall be taken in their own naughtiness.*

If the video links no longer work, or you would like to discuss this more with me, email [cdh114@gmail.com](mailto:cdh114@gmail.com)